



Model T200U Ultra-Sensitive Chemiluminescence NO/NO_y Analyzer

The Model T200U NO_y analyzer has been developed and refined specifically to address the challenges of NO_y monitoring as required, for example, in the US NCore network. It uses the proven chemiluminescence principle and is coupled with a remote NO_y converter via umbilical to allow measurements with a lower detectable limit of 50 ppt.

The Model T200U analyzer combines a gold plated reaction cell with an enhanced performance pump, special low noise photomultiplier tube, and unique signal conditioning to provide exceptional sensitivity. In addition, a pre-reactor separates the NO-O₃ reaction from background chemiluminescence to allow accurate auto-zero of the analyzer. The remote NO_y converter is provided with a stainless steel, NEMA 4X (IP65) enclosure and custom sample umbilical to allow a mounting height of 10 meters. In addition, the converter features a unique purge circuit designed to remove residual calibration gas.

All T Series instruments offer an advanced color display, capacitive touch screen, intuitive user interface, flexible I/O, and built-in data acquisition capability. All instrument set up, control and access to stored data and diagnostic information is available through the front panel, or via RS232, Ethernet, or USB com ports either locally or by remote connection using the included APIcom™ software.

- ▶ **Ranges: 0-5 ppb to 0-2,000 ppb, user selectable**
- ▶ **Independent ranges and auto ranging**
- ▶ **Large, vivid, and durable color graphics display with touch screen interface**
- ▶ **Ethernet, RS-232, and (optional) USB com ports**
- ▶ **Front panel USB connections for peripheral devices and firmware upgrades**
- ▶ **8 analog inputs (optional)**
- ▶ **Adaptive signal filtering optimizes response time**
- ▶ **Temperature & pressure compensation**
- ▶ **50 ppt lower detectable limit**
- ▶ **Catalytic ozone scrubber**
- ▶ **Comprehensive internal data logging with programmable averaging periods**
- ▶ **Ability to log virtually any operating parameter**
- ▶ **Two-year warranty**

Free Customer Support by telephone and email for the life of the instrument

Specifications

General

Ranges:	Min: 0-5 ppb Full scale Max: 0-2,000 ppb Full scale (selectable, independent NO, NO _y ranges and auto ranging supported)
Measurement Units:	ppb, µg/m ³ (selectable)
Zero Noise:	< 25 ppt (RMS)
Span Noise:	< 0.5% of reading (RMS) above 5 ppb
Lower Detectable Limit:	<50 ppt
Zero Drift:	< 0.1 ppb/24 hours
Span Drift:	< 0.5% of reading/24 hours
Lag Time:	20 seconds
Rise and Fall Time:	< 50 seconds to 95%
Linearity:	1% of full scale
Precision:	0.5% of reading above 5 ppb
Sample Flow Rate:	1800 cm ³ /min ±200 cm ³ /min (NO & NO _y) (Includes 800 cc bypass)

Electrical Specifications

Power Requirements:	100V-120V, 220V-240V, 50/60 Hz
Analog Output Ranges:	10V, 5V, 1V, 0.1V (selectable)
Recorder Offset:	±10%

Communication Specifications

Included I/O:	1 x Ethernet: 10/100Base-T 2 x RS232 (300-115,200 baud) 2 x USB device ports 8 x opto-isolated digital outputs 6 x opto-isolated digital inputs 4 x analog outputs
Optional I/O:	1 x USB com port 1 x RS485 8 x analog inputs (0-10V, 12-bit) 4 x digital alarm outputs Multidrop RS232 3 x 4-20mA current outputs

Physical Specifications

Operating Temperature Range:	5 - 40°C
Dimensions (HxWxD):	Analyzer: 7" x 17" x 23.5" (178 x 432 x 597 mm) Flow Module: 8.75" x 17" x 23.5" (222 x 432 x 597 mm) Converter: 13.5" x 10.5" x 6.5" (343 x 267 x 165 mm)
Weight:	Analyzer: 40 lbs (18 kg) Flow Module: 28 lbs (12.7 kg) Converter: 15 lbs (6.8 kg) External pump: 21 lbs (9.5 kg)

The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions. Specifications subject to change without notice. Printed documents are uncontrolled. SAL000050B (DCN 5880) T200U NO_y/10.13.10

How to Order

Model T200U NO_y includes:

- Two year warranty
- External pump
- Remote converter, flow module, and umbilical
- Independent ranges and auto ranging
- 47mm diameter particulate filter
- 8 isolated digital outputs
- 6 isolated digital inputs
- RS-232 ports
- Ethernet port
- USB ports for peripheral devices
- APIcom™ remote control software
- Select AC input voltage
 - 100V - 120V 50Hz
 - 220V - 240V 60Hz
- Select DC output voltage
 - 10V 5V
 - 1V 0.1V

Calibration Options:

- Ambient zero and span with Auto-Purge

Mounting Options:

- Rack mount brackets with chassis slides
- Rack mount brackets only
- Handle

I/O Options:

- 4-20mA outputs (up to three channels)
- USB com port
- 8 Analog Inputs
- Multi-drop RS232
- RS485

Other Options:

- Ammonia removal sample conditioner
- Expendables kit



9480 Carroll Park Drive ■ San Diego, CA 92121-5201
Ph. 858-657-9800 Fax 858-657-9816
Email api-sales@teledyne.com

For more information about the Teledyne API family of monitoring instrumentation products, call us or visit our website at

www.teledyne-api.com

© 2010 Teledyne - Advanced Pollution Instrumentation, Inc.

